

Appl. No. 09/183,380
Amdt. dated March 2, 2004
Reply to Official Action dated January 16, 2004

Amendments to the Claims

1. (*Currently Amended*) A wire-bound telecommunication device comprising:
- terminals for coupling the device to a subscriber line of a telecommunication network,
 - a transmission circuit, and
 - a signal energy detecting arrangement that is configured to determine a time domain signal representing signal energy of a substantial entirety of the signal on the subscriber line in a predetermined time interval,
- wherein the signal energy detecting arrangement comprises,
- a first comparator, the first comparator comparing the signal on the subscriber line with an amplitude reference signal, and generating a signal at a first comparator output;
 - an integrator, the integrator integrating the signal at the first comparator output at the predetermined time interval and generating an integrated output; and
 - a second comparator, the second comparator comparing the integrated output with an energy reference signal, and generating a control signal at a second comparator output.
2. (*Original*) A wire-bound telecommunication device as claimed in claim 1, wherein
- the signal energy is determined cyclically.
3. (*Original*) A wire-bound telecommunication device as claimed in claim 1, wherein
- the signal energy determination is initiated by a trigger pulse.
4. (*Original*) A wire-bound telecommunication device as claimed in claim 1, wherein
- the telecommunication device operates according to a given signal protocol,
- the signal energy being determined during at least one predetermined expected signal interval.

Appl. No. 09/183,380
Amdt. dated March 2, 2004
Reply to Official Action dated January 16, 2004

5. *(Original)* A wire-bound telecommunication device as claimed in claim 4, wherein the signal protocol is a caller identification signal protocol and the expected signal interval comprises a tone alerting signal.
6. *(Original)* A wire-bound telecommunication device as claimed in claim 5, wherein the signal energy determination is continued until a further expected signal interval comprising a caller identification signal.
7. *(Original)* A wire-bound telecommunication device as claimed in claim 6, wherein a caller identification signal detector is initiated by an initiating pulse which is generated a predetermined time after the detection of the tone alerting.
8. *(Original)* A wire-bound telecommunication device as claimed in claim 7, wherein the initiation pulse controls switching of an impedance parallel to the subscriber line.
9. *(Original)* A wire-bound telecommunication device as claimed in claim 1, wherein the energy determination is used for monitoring subscriber line load variations.
10. *(Currently Amended)* A circuit for use in a wire-bound telecommunication device comprising
terminals for coupling the device to a subscriber line of a telecommunication network and a transmission circuit,
the circuit comprising
a signal energy detecting arrangement that is configured to determine signal energy of a substantial entirety of the signal on the subscriber line in a predetermined time interval,
wherein the signal energy detecting arrangement comprises,
a first comparator, the first comparator comparing the signal on the

Appl. No. 09/183,380
Amdt. dated March 2, 2004
Reply to Official Action dated January 16, 2004

subscriber line with an amplitude reference signal, and generating a signal at a first comparator output;

an integrator; the integrator integrating the signal at the first comparator output at the predetermined time interval and generating an integrated output; and
a second comparator, the second comparator comparing the integrated output with an energy reference signal, and generating a control signal at a second comparator output.

11. (New) A wire-bound telecommunication device comprising:

terminals for coupling the device to a subscriber line of a telecommunication network,

a transmission circuit, and

a signal energy detecting arrangement that is configured to determine a time domain signal representing signal energy of a substantial entirety of the signal on the subscriber line in a predetermined time interval,

wherein the signal energy detecting arrangement comprises,

an analog-to-digital converter, having an A/D output, and an A/D input coupled to the subscriber line of a telecommunications network,

a comparator/counter, having an input coupled to the A/D output, the comparator/counter configured as an amplitude detector, the comparator/counter comparing the signal on the subscriber line with an amplitude reference signal and an energy reference signal at the predetermined time interval, generating data at a comparator/counter output; and

a register, configured to store the data from the comparator/counter output, the register having an output databus.

12. (New) A wire-bound telecommunication device as claimed in claim 11, wherein the signal energy is determined cyclically.

13. (New) A wire-bound telecommunication device as claimed in claim 11, wherein the signal energy determination is initiated by a trigger pulse.

Appl. No. 09/183,380
Amdt. dated March 2, 2004
Reply to Official Action dated January 16, 2004

14. (New) A wire-bound telecommunication device as claimed in claim 11, wherein the telecommunication device operates according to a given signal protocol, the signal energy being determined during at least one predetermined expected signal interval.

15. (New) A wire-bound telecommunication device as claimed in claim 14, wherein the signal protocol is a caller identification signal protocol and the expected signal interval comprises a tone alerting signal.

16. (New) A wire-bound telecommunication device as claimed in claim 15, wherein the signal energy determination is continued until a further expected signal interval comprising a caller identification signal.

17. (New) A wire-bound telecommunication device as claimed in claim 16, wherein a caller identification signal detector is initiated by an initiating pulse which is generated a predetermined time after the detection of the tone alerting.

18. (New) A wire-bound telecommunication device as claimed in claim 17, wherein the initiation pulse controls switching of an impedance parallel to the subscriber line.

19. (New) A wire-bound telecommunication device as claimed in claim 11, wherein the energy determination is used for monitoring subscriber line load variations.